

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001078**Date Inspected:** 03-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhang Zhong, Cui Yiru**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Bay 7

OBG-Floor Beams/Diaphragm

The QA Inspector Brannon randomly observed ZPMC welding personnel utilizing the carbon air arc gouging process to back gouge welds in Floor Beam splice weld joints FB007-06-021 side b and FB001-02-021 side b in preparation for submerged arc welding (SAW) process.

Weld Joints FB007-02-021 and FB-007-03-026 side b:

QA Inspector Brannon randomly observed ZPMC qualified welder Mrs. Wu Huang Xin Lan ID #044780 groove welding weld joint numbers FB007-02-021 and FB-007-03-026 side b. Mrs. Huang was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12k, class JW3 machine. QA Inspector Brannon observed the ZPMC QC Inspector Zhang Zhong verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 65°C and measured the welding parameters to be 486 amps, 31.8 volts and a travel speed of 450 mm/min. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-B-L2c-S-1, Revision 0.

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Weld Joints FB007-02-021 and FB-007-03-026 side b:

QA Inspector Brannon randomly observed ZPMC qualified welder Mrs. Wang Min ID #048296 groove welding weld joint FB021-02-080 side b. Mrs. Huang was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12k, class JW3 machine. QA Inspector Brannon observed the ZPMC QC Inspector Cui Yiru verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 62°C and measured the welding parameters to be 525 amps, 30.0 volts and a travel speed of 423 mm/min. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-B-L2c-S-1, Revision 0.

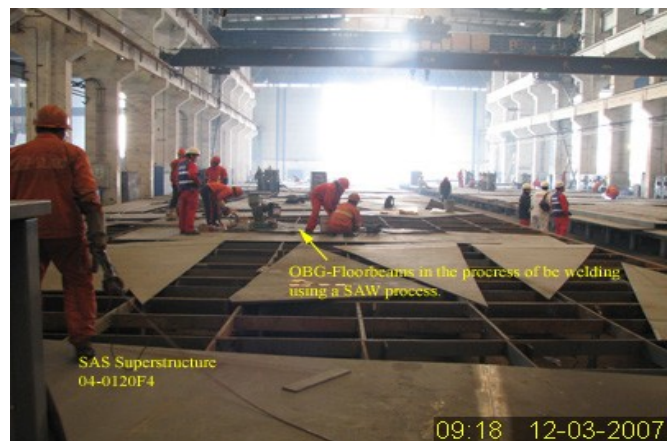
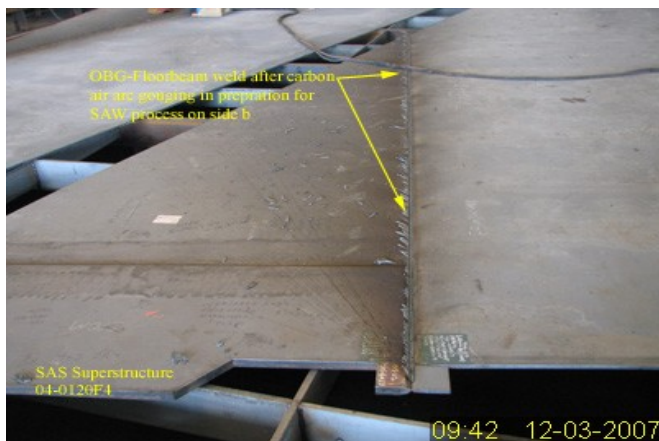
OBG Diaphragm - Heat Straightening:

QA Inspector Brannon randomly observed ZPMC personnel performing heat straightening on floor beam diaphragms. ZPMC heat straightening numbers HR1(B)-029, HR1(B)-030, HR1(B)-031, HR1(B)-032, HR1(B)-033 and HR1(B)-029. QA Inspector Brannon observed the ZPMC QC Inspector Zhang Zhong observing the process.

Weld Joints FB026-02-080 and FB026-01-080 side a:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Jin Rong ID#066471 tack welding weld joints FB026-02-080 and FB026-01-080 side a. Mr. Jin was observed welding in the 1G (flat) position utilizing a shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal brand THJ506Fe-1, class E7018-1 manual. QA Inspector Brannon observed the ZPMC QC Inspector Cui Yiru verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 60°C and measured the welding parameters to be 176/178 amps. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-P-2211-B-U2-FCM, Revision 0.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

No relevant conversations on this date.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon, Sherri	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer
